hydroxypropyl celluose, 10 mL of propylene glycol, 10 mL of isopropyl myristate and 100 mL of purified alcohol USP. The resulting gel mixture is then incorporated into containers, such as tubes, which are suitable for topical administration.

Example 6g

Ophthalmic Solution Composition

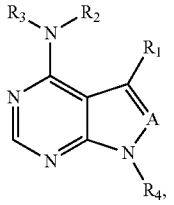
To prepare a pharmaceutical opthalmic solution composition, 100 mg of a compound of Formula (A) is mixed with 0.9 g of NaCl in 100 mL of purified water and filtered using a 0.2 micron filter. The resulting isotonic solution is then incorporated into ophthalmic delivery units, such as eye drop containers, which are suitable for ophthalmic administration.

It is understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims. All publications, patents, and patent applications cited herein are hereby incorporated by reference in their entirety for all purposes.

What is claimed is:

1. A method for treating a B-cell proliferative disorder comprising administering to a subject in need thereof a therapeutically effective amount of an irreversible covalent Btk inhibitor having the structure of Formula (A)

Formula (A)



wherein

A is N;

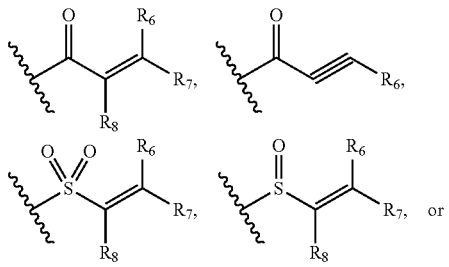
R_1 is L_2-(substituted aryl), where L_2 is a bond;

R_2 and R_3 are independently selected from H, lower alkyl and substituted lower alkyl;

R_4 is L_3-X-L_4-G, wherein,

L_3, X and L_4 taken together form a nitrogen containing heterocyclic ring;

G is



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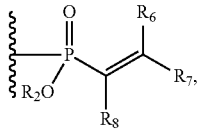


wherein,

R_6, R_7 and R_8 are independently selected from among H, lower alkyl or substituted lower alkyl, lower heteroalkyl or substituted lower heteroalkyl, substituted or unsubstituted lower cycloalkyl, and substituted or unsubstituted lower heterocycloalkyl; or a pharmaceutically acceptable salt thereof.

2. The method of claim **1**, wherein the B-cell proliferative disorder is a non-Hodgkin lymphoma selected from the group consisting of diffuse large B cell lymphoma, follicular lymphoma, mantle cell lymphoma and burkitt lymphoma.

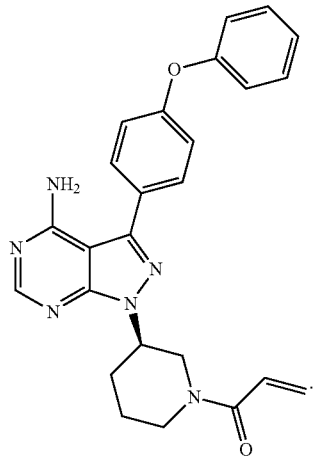
3. The method of claim **1**, wherein the B-cell proliferative disorder is Waldenstrom macroglobulinemia.

4. The method of claim **1**, wherein the B-cell proliferative disorder is plasma cell myeloma.

5. The method of claim **1**, wherein the irreversible covalent Btk inhibitor is administered orally.

6. The method of claim **1**, wherein a covalent bond is formed between a portion of the acrylamide on the irreversible covalent Btk inhibitor and a portion of a cysteine residue on a Bruton's tyrosine kinase (Btk).

7. A method for treating a B-cell proliferative disorder comprising administering to a subject in need thereof an irreversible covalent Btk inhibitor, wherein the irreversible covalent Btk inhibitor comprises the structure



8. The method of claim **7**, wherein the B-cell proliferative disorder is a non-Hodgkin lymphoma selected from the group consisting of diffuse large B cell lymphoma, follicular lymphoma, mantle cell lymphoma and burkitt lymphoma.

9. The method of claim **7**, wherein the B-cell proliferative disorder is Waldenstrom macroglobulinemia.

10. The method of claim **7**, wherein the B-cell proliferative disorder is plasma cell myeloma.

11. The method of claim **7**, wherein a covalent bond is formed between a portion of the irreversible covalent Btk inhibitor and a portion of a cysteine residue of a Bruton's tyrosine kinase (Btk).

12. The method of claim **1**, wherein the cysteine residue is cysteine 481 of the Bruton's tyrosine kinase (Btk).